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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/402,232 09/30/99 ESKUCHEN

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023657 HM12/1003
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EXAMINER

MAIER, L

ART UNIT

PAPER NUMBER

1623

DATE MAILED:

10/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/402,232

Applicant(s)

Eskuchen

Examiner

L. Igh Mai r

Art Unit

1623

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Aug 1, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 25-37 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 25-37 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Continued Prosecution Application

The request filed on August 1, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/402,232 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The process recited in the independent claim 25 comprises a limitation that the acid catalyst is added to the glucose/fatty alcohol suspension before drying said suspension over the recited temperature gradient. This limitation is not described in the body of the specification. Furthermore, the examples explicitly describe drying the suspension *before* the addition of the acid catalyst.

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Claim Rejections - 35 U.S.C. § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The claims are drawn to a process of making alkyl or alkenyl oligoglycosides, the process comprising the formation of a glucose syrup/fatty alcohol suspension further comprising an acid catalyst. The reaction mixture is dried at a temperature gradient of from about 70 to 120°C to form dried suspension. Other dependent claims recite further limitations major among them being: (1) solids content of the syrup; (2) wt% of monomeric glucose; (3) preheating fatty alcohol; (4) ratios of reactants; and (5) reduced pressure.

Claims 25-33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCURRY et al (US 4,950,743).

McCURRY teaches the preparation of alkylglycosides, the process comprising preparation of a mixture of fatty alcohols (C_8 to C_{20} , saturated or unsaturated - see col 2) and glucose monohydrate. See particularly Example 1. The molar ratio of glucose to alcohol is 1:2.5. The mixture is dried at about 60-65°C at reduced pressure and heated to about 100°C thereafter. The heating of one temperature to another inherently comprises a "temperature gradient." Drying is followed by addition of aqueous solution of acid catalyst (acid catalyst is about 3-4 wt% of the mixture) to catalyze acetalization.

McCURRY does not teach the use of a glucose syrup (supercooled or otherwise) or preheated fatty alcohol to prepare the suspension. It would be obvious to one having ordinary

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skill in the art at the time the invention was made to use the reactants in the recited form. The artisan would be motivated to use glucose syrup/preheated alcohol to facilitate the mixing of the initial suspension. It would be within the scope of the artisan to optimize the amount of solids (concentration) in the syrup.

McCURRY does not teach the addition of the acid catalyst to the glucose/alcohol suspension before the drying step. Selection of any order of mixing ingredients is prima facie obvious. The artisan would have been motivated to add all reactants at once for convenience.

McCURRY does not explicitly exemplify the full range of the temperature gradient recited in the claims. However, in the paragraph bridging col 3 and 4, McCURRY teaches that the optimum temperature of acetalization ranges from about 85° to 120°C, and that at temperatures greater than 120°C, side reactions proceed faster than the primary reaction. It would be within the scope of the artisan to balance maximizing the rate of reaction (using a temperature up to 120°C) and minimizing side reactions (using a temperature not significantly greater than 120°C).

Therefore, it would have been obvious to one having ordinary skill in the art to have heated the initial suspension to a temperature up to about 120°C, the process thereby comprising the recited temperature gradient.

McCURRY teaches a laboratory process that is conducted in four-neck flask. The artisan would be motivated to make the obvious modification of performing the reaction in a tank reactor to convert the exemplified laboratory process to an industrial one. McCURRY further does not

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teach the full range of ratios between the various reactants. It would be within the scope of the artisan to optimize these parameters.

Claims 25 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCURRY et al (US 4,950,743) in view of GRUTZKE (US 5,648,475).

The invention is as set forth above. A further limitation recites a discontinuous process carried out in a cascade of 3 to 6 stirred reactors.

McCURRY teaches as set forth above. McCURRY does not teach the process using a series of stirred reactors in a cascade.

GRUTZKE teaches a process for preparing alkyl glycosides that may be performed discontinuously in a cascade of reactors. See col 3, lines 19-32. It would have been obvious to one having ordinary skill in the art to have performed the instant process in a cascade of stirred reactors. The artisan would be motivated to conduct the process in a series of reactors for the ability to fine-tune the conditions necessary to optimize the process at every step. It would be within the scope of the artisan to determine the optimum number of reactors and the pressure gradient with routine experimentation. It would be obvious to perform the first step of the process (drying the suspension) in the first reactor.

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Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (703) 308-4525. The examiner can normally be reached on Tuesday, Wednesday, or Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Gary Geist (703) 308-1701, may be contacted. The fax phone number for Group 1600, Art Unit 1623 is (703) 308-4556 or 305-3592.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-1235.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more.

Leigh C. Maier
Patent Examiner
September 28, 2001


KATHLEEN K. FONDA
PRIMARY EXAMINER